Consideration and Entry of the Declaration under Rule 132

In reviewing the Final Rejection, it is clear that the Examiner relies upon assumptions and facts not in evidence when he concludes that "the claimed product appears to be the same or similar to that of the prior art." The Examiner suggests that, because he believes this to be true, that "the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product" citing portions of MPEP Section 2113.

Without agreeing that the Examiner has made out a prima facie case of the product produced by the method of claim 1 or the assembly of claim 22 being the same as the John paent (USP 3,022,870), Applicants proffer the attached Rule 132 Declaration from Dr. Steven Harris, an expert in the field. The Declaration establishes what is and is not taught by the John reference, and how the resultant product in the John reference is clearly not "the same or similar" to the product produced by Applicants' claimed process.

This Declaration could not have been provided at an earlier date because the Examiner had not previously alleged either that the claimed product appears to be the same or similar to that of the John product or that the burden had shifted to Applicants to provide evidence establishing the difference. This Declaration and the expert analysis of the John patent comprise the requested "evidence" as discussed in detail below.

It is noted that paragraphs 6-31 of the Declaration provide clear and concise evidence proving that the method of claim 1 and the assembly of claim 22 provide a resultant product which differs substantially from that disclosed in the prior art John patent (U.S. Patent

3,022,870) and that the differences would not be apparent to those of ordinary skill in the art absent the disclosure contained in Applicants' specification and in the Rule 132 Declaration.

This Declaration raises no new issues requiring additional consideration and/or search, does not attempt to expand or narrow the scope of the existing claims, and does reduce the issues on Appeal (with respect to whether the resultant product is "the same or similar" to the cited John reference). As a result of the above, entry of the Declaration and the attachment for the purposes of appeal and pursuant to the provisions of 37 CFR §1.116 is believed both appropriate and is respectfully requested.

The fact evidence of the Declaration of Dr. Harris

In the rejection of claims 22 and 23 on page 2 of the Final Rejection, the Examiner suggests that the claimed product in the John patent is "the same or similar to that" of the claimed invention. The Examiner indicates the burden shifts to the Applicants to come forward with evidence establishing an unobvious difference.

Firstly, the critical difference is that the John patent does not teach the method step in claim 1 of "allowing the sealant to **cure" before bringing mating surfaces together**. In claim 22, the resultant assembly is required to have a mating surface with "a layer of polysulphide sealant **cured thereon prior to assembly**." The Examiner correctly notes that the John reference discloses an assembly in which an uncured layer of polysulphide sealant has been applied prior to assembly and then cured post-assembly. The Examiner perhaps logically assumes that, even though there is a difference in the method of assembly (i.e., the present invention requiring cured sealant prior to assembly and the John patent teaching uncured sealant prior to assembly), the resultant post-assembly cured sealant forms the same or similar product.

The error in this logical appearing sequence of thought will be readily apparent to anyone having ordinary skill in the art when reviewing Applicants' specification and certainly in view of the Rule 132 Declaration.

It will be clear that the John reference contains no disclosure of pre-assembly **curing** of the polysulphide sealant. Dr. Steven Harris, is an expert in the field based upon his educational and professional experience in the CV attached to his Declaration. He has reviewed the claims, the Official Action and the patent application as originally filed. He has also reviewed the John reference in detail and has positively stated (in paragraph 28 of the Declaration) that, based on the previously discussed evidence, "the John reference does not teach that the layer of polysulphide sealant is **cured 'prior to' assembling the mating surfaces** . . ." (emphasis added). This conclusion is reached by numerous fact statements contained in the John reference and analyzed in the Declaration.

Dr. Harris first provides the well-known definition of a "cured" polysulfide sealant in paragraph 6, i.e., the sealant has a "Shore A hardness of approximately 39, is tack free, will no adhere to other materials . . . and which will have good levels of environmental resistance." While this is the common definition of "cured" and is consistent with the specification definition, having Dr. Harris state it in paragraph 6 of the Declaration makes it of record.

Based upon the common definition of "cured," Dr. Harris concludes that the Examiner's conclusion that John discloses "layers of polysulphide sealant cured thereon prior to assembly" (Final Rejection, page 2, section 3) is "simply incorrect." In paragraph 8 of the Declaration, Dr. Harris confirms that the Examiner's conclusion that John teaches "applying a cured polysulphide

sealant to at least one of the mating surfaces" in section 5 on page 3 of the rejection is similarly incorrect.

The two errors in the Official Action with respect to independent claim 22 and independent claim 1 addressed in paragraphs 7 and 8, respectively, in Dr. Harris' Declaration are supported by the subsequent discussions in the Declaration. Dr. Harris' Declaration, paragraphs 9-16, discuss the many differences in the resultant product caused by using **uncured sealant prior to assembly** as opposed to Applicants' claimed **cured sealant prior to assembly**. This will be discussed in detail later. However, with respect to the evidence proving that the John reference deals only with **uncured** polysulphide sealant, Dr. Harris' Declaration is pretty complete.

For example, paragraph 18 identifies the portion of the John reference which alleges that "curing is completed with about 12 hours" but that based upon this disclosure, those of ordinary skill in the art would understand that the polysulphide sealant disclosed in John is not "cured" as described in the Applicants' specification and claims or as understood to those of ordinary skill in the art.

Paragraph 19 notes that, at best, the John polysulphide sealant may not be more than 50 to 70% cured during the time period specified and that it would certainly not be fully cured based upon the requirements in the present specification, i.e., in 14 days the sealant is approximately 99% cured. At the end of paragraph 19, Dr. Harris concludes that John discloses an un-cured polysulphide in his assembly process.

In paragraphs 20 and 21, Dr. Harris notes the disclosures in the John patent which suggest that the sealant is not cured, because it uses an "adherent" polymeric film or strip. Dr.

Harris notes that cured polysulphide sealant does not stick to anything when pressed against it, thereby concluding that, because the John sealant sticks to materials, it must teache an uncured sealant.

In paragraph 22, Dr. Harris notes that the John reference teaching of plastic films similar to the cured sealant film does not make "adequate contact" with mating surfaces if applied after assembly.

Paragraphs 23-27 of Dr. Harris' Declaration all cite instances in the John patent which disclose that the uncured sealant used in John is adherent and therefore specifies a property which is missing from cured polysulphide sealant, thereby establishing in each instance that the film of sealant used in the John assembly process is not cured.

Thus, all of these paragraphs lead Dr. Harris to the clear conclusion in paragraph 28 that the John reference does not teach the use of **cured** polysulphide sealant **prior to assembling mating surfaces**.

Dr. Harris' Declaration also establishes not only differences in the product (depending upon whether cured or uncured sealant is used prior to the assembly process), he also discusses a number of benefits associated with the use of **cured sealant prior to the assembly process** as in Applicants' independent claims 1 and 22.

He summarizes in paragraph 9 of the Declaration that these benefits will be obvious to those of ordinary skill in the art in view of Applicants' specification, i.e., the pre-assembly curing of polysulphide sealant.

Paragraph 10 of the Declaration notes that pre-assembly curing results in a layer of sealant "that is thicker and will exist across the faying or mating surfaces." Dr. Harris explains

that this is because the sealant layer, having already been cured, is not prone to squeeze out near fasteners which provide the mating pressure at the mating surfaces. This is a consequence of the fact that the sealant is never in the liquid phase when it's under compression. In the John reference, the un-cured liquid sealant is compressed when the assembly is put together and liquid sealant would be squeezed out from the area of the mating surfaces, therefore leaving little or no sealant in this location.

Paragraph 11 of Dr. Harris' Declaration confirms that after assembly with pre-cured sealant, "the sealant layer will not be in tension but will normally be in compression." One benefit of this is that, as Dr. Harris notes, the pre-assembly curing of the sealant tends to "result in less broken sealant between the components in the joint of the invention."

In paragraph 12, Dr. Harris testifies that the known and conventional sealant process as disclosed in John and in the other prior art, is with sealant applied in the liquid phase to one of the mating surfaces, which is then brought into contact with the other mating surfaces and then they are fastened together within the working time of the sealant, i.e., prior to its becoming cured. The joint is then left undisturbed until a significant level of cure is attained.

Dr. Harris' Declaration paragraphs 13-15 denote problems associated with the conventional post-assembly curing as disclosed in the John reference, i.e., in paragraph 13 a good portion of the liquid sealant will be squeezed out between the surfaces when the mating surfaces are fastened together. Once the sealant has cured, as discussed by Dr. Harris in paragraph 14, it will be under "slight tension due to the inherent shrinkage occurring during curing process." This is important, because this can lead to breakage of very thin sealant sheets resulting from the sealant being squeezed out between mating surfaces. Of course, any sealant

breakage can result in leakage past the sealant material. As noted, the sealant in the vicinity of fasteners which are used to hold the two mating surfaces together is almost completely absent or reduced to an extremely thin film, because in the immediate area of the fasteners, the two mating surfaces are held very tightly together and if the sealant is liquid when they are assembled, it has been squeezed out from the space.

Paragraph 16 of Dr. Harris' Declaration emphasizes the benefits differences between pre-assembly curing and post-assembly curing of the sealant. He notes that, in accordance with the present invention, there will be a thicker layer of sealant in the vicinity of the fasteners, since prior to assembly there is no metal-to-metal contact which would squeeze out uncured sealant between surfaces thereby reducing the thickness at that point. Instead, the sealant is fully cured when the assembly step occurs and therefore "it does not squeeze or flow under assembly pressure."

Therefore, in view of Dr. Harris' Declaration, there is substantial evidence contained in the John patent so as to lead one of ordinary skill in the art to clearly understand that John, instead of teaching pre-assembly curing, **only teaches post-assembly curing**, and that in view of Applicants' specification, there are numerous problems associated with post-assembly curing of polysulphide sealants, i.e., sealant under tension, very thin sealant layers in the vicinity of fasteners, the lack of sealant under compression, etc.

Applying the fact evidence from Dr. Harris' Declaration to the pending rejections

Claims 22 and 23 stand rejected under 35 USC §102 as anticipated by the John reference. Claim 22 and claim 23 dependent thereon specify a resultant assembly in which the mating surfaces have "a layer of polysulphide sealant cured thereon prior to assembly." As discussed in

paragraphs 12-16 of the Harris Declaration, the John patent clearly fails to teach a resultant assembly in which polysulphide sealant has been cured prior to assembly.

As a result of not curing prior to assembly, the John patent would have the discussed problems, i.e., very thin layers of sealant due to the sealant "being squeezed out from between the surfaces" (Declaration ¶13), cured sealant which is "under slight tension due to the inherent shrinkage occurring during curing process" (Declaration ¶14), sealant almost completely absent from the area surrounding fasteners (Declaration, ¶15), and substantial metal-to-metal contact ("which would otherwise take place with the uncured sealant being squeezed out of the space between two contact surfaces") (Declaration ¶16).

As the Examiner notes in the sentence bridging pages 2 and 3 of the Official Action, even if the Examiner provides a rationale tending to show the claimed product appears to be the same or similar to that of the prior art, even though produced by a different process, "the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claim product and the prior art product." Applicant's specification discloses a substantially different process from that disclosed in John. Applicants' specification, coupled with Dr. Harris' Declaration, clearly provides evidence establishing that the resultant cured sealant in John has completely different characteristics than the pre-assembly cured sealant of claim 22.

As a result, even if the Examiner had a rational basis for alleging that the burden has been shifted, Applicants have clearly met that burden with evidence, Dr. Harris' expert opinion testimony with respect to what is actually taught in the John patent, which clearly establishes unobvious differences between the assembly of claim 22 and the assembly disclosed in the John patent. As a result, Applicants have clearly established that the subject matter of claims 22 and

23 are not anticipated by the John reference and any further rejection thereunder is respectfully traversed.

Claims 1-10, 14 (dependent on 1-10) and 20-23 also stand rejected under 35 USC §103 as unpatentable over John in view of Cheron (FR 2498671), Ishiara (JP 11072999) or Hanson (U.S. Patent 4,697,970). The Examiner's premise in making the obviousness rejection is that the John reference teaches "applying a cured polysulphide sealant to at least one of the mating surfaces." (Page 3, section 5 of the Final Rejection). As noted in Dr. Harris' Declaration, paragraph 8, this statement by the Examiner is clearly incorrect (for all the reasons discussed above in the Declaration. In fact, for all of the above reasons discussed in detail, John actually teaches away from applying a "cured" polysulphide sealant and instead relies upon applying an uncured polysulphide sealant prior to assembly.

The Examiner's admission on page 4, line 6, i.e., "John is silent as to applying the polysulphide sealant directly to at least one of the mating surfaces" is very much appreciated and appears to be dispositive of the issue in claim 1 which recites the first step of "applying to at least one mating surface a layer of polysulphide sealant and allowing the sealant to cure."

Also, as clearly discussed in paragraphs 18-27 of the Harris Declaration, the John reference contains no teaching of applying a sealant to one mating surface and "allowing the sealant to cure" as required by claim 1. The Examiner's admission, coupled with the detailed analysis of the John reference by Dr. Harris in paragraphs 18-27, establishes that the evidence in the John reference confirms that only uncured polysulphide sealant is applied to a mating surface.

As a result of the above, since the primary reference John teaches the direct opposite of claim 1, method step 2 ("after allowing said sealant to cure, bringing together the mating surfaces") and instead teaches that the assembly process should occur with uncured sealant, John quite clearly would lead one of ordinary skill in the art away from Applicants' claimed invention.

At no point in the Final Rejection does the Examiner contend that any of the secondary references, i.e., Cheron, Ishiara or Hanson, contain any teaching of **pre-assembly curing** which is recited in Applicants' claim 1, step 2. Should the Examiner contend otherwise, he is respectfully requested to identify any such specific teaching. Absent a specific teaching, the Examiner cannot rebut the conclusion based upon the John reference (with or without Dr. Harris' Declaration) that only uncured sealant is used prior to assembling the mating surfaces. As a result, claim 1 is clearly patentable under 35 USC §103 over the John reference by itself or when combined with any or all of Cheron, Ishiara or Hanson.

The rejection under 35 USC §103 is clearly in error for at least two main reasons. First, the Examiner fails to establish a *prima facie* case of obviousness, i.e., no references teach pre-assembly curing of sealant. This critical feature of independent claims 1 and 22 clearly distinguishes over all of the cited prior art references. Secondly, even if the Examiner changes his rejection to rely upon some feature in one of the secondary references (for teaching pre-assembly curing of the polysulphide sealant and thereby supporting his allegation of a *prima facie* case of obviousness), he cannot rebut the contrary teaching in the John reference which suggests **post-assembly curing**.

Because the fact of John's teaching of post-assembly curing is clearly supported by the various statements made in the John reference as analyzed by Dr. Harris and by the statements in

Dr. Harris' Declaration by themselves, there is no doubt of this fact. Accordingly, even if a *prima facie* case of obviousness has been made out (which it has not), the contrary teaching of John is a clear rebuttal to any such *prima facie* case.

In view of the above, entry of the Rule 132 Declaration is appropriate and reconsideration of the Final Rejection of the independent claims as well as claims dependent thereon in view of this fact evidence is required.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that pending claims 1-23 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact applicant's undersigned representative.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____
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Attachment:
Declaration of Dr. Steven Harris Under Rule 132 w/ attached CV
Clearer, but unsigned copy of Dr. Harris' Declaration

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of
WEST et al.
Serial No. 10/535,493
Filed: May 18, 2005
For: ASSEMBLY OF SEALED COMPONENTS

Atty. Ref.: SCS-540-563
TC/A.U.: 1791
Examiner: J. Goff II

* * * * * * * * * * *

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

DECLARATION OF DR. STEVEN HARRIS UNDER RULE 132

I, Steven Harris, hereby declare as follows:

1. That I am a chemist currently employed by BAE Systems – Advanced Technology Center (ATC) at Sowerby, United Kingdom;

2. That my educational and professional experience is listed in the attached CV dated 8 August 2007;

3. That I have been asked to review the above-identified patent application as originally filed, the claims in the October 1, 2007 Amendment and the Official Action mailed on December 12, 2007 by the U.S. Patent and Trademark Office and I have reviewed these three documents;

4. In the Examiner's rejection of independent claim 22 under §102 as being anticipated by John (U.S. Patent 3,022,870), the Examiner contends that "the claimed

product appears to be the same or similar to that of the prior art, although produced by a different process."

5. While the Examiner's initial conclusion is understandable, it is incorrect and does not reflect knowledge of the properties of cured sealant as opposed to uncured sealant or the difference in properties depending upon when curing occurs during the assembly process.

6. Claim 22 requires an assembly of surfaces "having a layer of polysulphide sealant cured thereon prior to assembly." A "cured" layer of polysulphide sealant is a sealant which has reached a Shore A hardness of approximately 39 and which is tack free, will not adhere to other materials, e.g., glass or metal, upon contact or under light pressure, e.g., finger pressure, and which will have good levels of environmental resistance.

7. With respect to claim 22, the Examiner's rejection under 35 USC §102(b) is based upon John disclosing the claims "layer of polysulphide sealant cured thereon prior to assembly" which is simply incorrect.

8. The Examiner also states with respect to the rejection of claim 1 under 35 USC §103 that the John reference teaches "applying a cured polysulphide sealant to at least one of the mating surfaces" in section 5 on page 3 of the Final Rejection and this statement is similarly incorrect.

9. Those of ordinary skill in the art will be well aware of the benefits of the invention claimed in claims 1 and 22 in view of Applicants' specification, i.e., the pre-assembly curing of polysulphide sealant. These benefits of curing the sealant prior to

bringing together the mating surfaces are a significant improvement over known processes and provide a number of unexpected advantages.

10. The benefits of pre-assembly curing of sealant on one of the mating surfaces include a resultant layer of sealant that is thicker and will exist across the faying or mating surfaces. This benefit is because the sealant layer, having already been cured, is not prone to squeeze out near fasteners (which provide the mating pressure), as the sealant is never in the liquid phase when under compression.

11. The pre-assembly curing of sealant also tends to result in less broken sealant between the components in the joint of the invention. The cured sealant bond has a typical strength of 3.5 to 5 MPa and, because of the curing of the sealant prior to assembly of the mating surfaces, the sealant layer will not be in tension but will normally be in compression.

12. During the known and conventional sealant process as disclosed in John, sealant is applied in the liquid phase to one of the mating surfaces which is then brought into contact with the other mating surface and they are fastened together within the working time of the sealant, i.e., prior to its becoming cured. The joint is then left undisturbed until a significant level of cure is attained.

13. The consequence of post-assembly curing is that the resulting layer of sealant will be thin, owing to the mating surfaces being fasted together with the sealant still in the liquid phase being squeezed out from between the surfaces.

14. The post-assembly cured sealant will also be under slight tension due to the inherent shrinkage occurring during curing process.

15. The post-assembly cured sealant will be almost completely absent from area immediately surrounding fasteners (holding the two mating surfaces together) because the fasteners hold the areas tightly against one another, thereby excluding sealant therefrom.

16. With the cured sealant assembly process, there is a thicker layer of sealant in the vicinity of fasteners, there is no metal-to-metal contact (which could otherwise take place with the uncured sealant being squeezed out of the space between the two contact surfaces), especially in the vicinity of the fasteners. The uncured sealant is simply not stable enough to resist squeezing of the sealant out of the joint when the joining pressure is applied. In the present invention, because the sealant is fully cured, it does not squeeze or flow under assembly pressure.

17. Turning now to the error in the Examiner's understanding, i.e., that the John reference teaches sealant curing prior to assembly. Those of ordinary skill in the art in the polysulphide sealant field will be well aware that polysulphide sealants typically cure in around 14 days and this is disclosed in the originally filed specification at page 6, lines 18-20.

18. In the John reference at column 2, lines 63-64, there is a statement that the mixture used cures in about 2 hours to a non-spreadable state. John at column 2, line 71 to column 3, line2, states that the curing is completed within about 12 hours. Based upon these disclosures in John, it would be clear to those of ordinary skill in the art that John's polysulphide sealant is not "cured" either as described in Applicants' specification and claims or as known to those of ordinary skill in the art.

19. Based upon the disclosure of the alleged curing cycles in John, it is clear that the John polysulphide sealant may never achieve more than 50 to 70% cure during the time periods specified. In the time period for polysulphide sealant curing specified in the current specification, i.e., 14 days, the sealant is approximately 99% cured and therefore this is the definition to the word "cure" as used in the specification and the claims. Thus John discloses an un-cured polysulphide sealant in his assembly process.

20. In column 1, line 1 of the John patent, it is stated that "[t]his invention relates to adherent polymeric films or strips . . . ." An "adherent" film or strip sticks to things by electrostatic force. The polysulphide sealant of the present invention is not "adherent." After fully curing, the presently claimed polysulphide sealant does not stick to anything when pressed against it. The cured polysulphide sealant only forms a bond when it is pressed against something for a period of time. Thus John discloses an un-cured polysulphide sealant in his assembly process.

21. Column 1, lines 13-15 of John states "thin self-sustaining films or strips having a polysulphide polymer base which are adherent to clean aluminum surfaces." The present invention's polysulphide sealant does not adhere to clean aluminum surfaces or to any other surface in its fully cured state. Thus John discloses an un-cured polysulphide sealant in his assembly process.

22. Column 1, lines 47-49 of the John reference states "[f]irm plastic films, on the other hand, do not make adequate contact with the faying surfaces and do not provide a fully effective sealer." This passage would lead those of ordinary skill in the art away from the present invention by indicating that films which are apparently similar in

consistency to the sealant of the present invention do not make "adequate contact" with the mating surfaces after curing. Thus John discloses an un-cured polysulphide sealant in his assembly process.

23. Column 1, lines 59-63 of John states that "[i]t [the film] does not adhere to the fingers, nor indeed to most materials on temporary contact, but is found to adhere to clean aluminum as well as many other surfaces when held briefly in contact therewith." As noted above, the cured sealant of the present invention does not do this or have this feature and thus John discloses an un-cured polysulphide sealant in his assembly process..

24. Column 1, lines 68-70 of John states "[i]t adheres to the metal surfaces, forms a continuous sealing layer therebetween and effectively prevents passage of air and liquids." Again, this teaching in the John reference stipulates adherence of the film to the metal, which does not occur with the cured sealant of the present invention. Thus John discloses an un-cured polysulphide sealant in his assembly process.

25. Column 3, lines 5-9 of the John reference states "[t]he film produced as just described is found to be strongly adherent to glass and only slightly less adherent to clean aluminum. It may be removed from one of the protective polyethylene films and adhered to a metal surface under slight finger pressure." This passage in John again leads me to strongly believe that the film used in the John assembly process is nowhere near a fully cured polysulphide sealant.

26. John at column 3, lines 43-45, states "[i]n place of maleic anhydride, other equivalent adhesion-imparting acidic materials such as dichloromaleic anhydride and itaconic anhydride may be used." Again, this is further evidence to me that polysulphide

sealant film in John is not cured before completion of his assembly process and that acidic bonds are being formed with the metal substrate during the post-assembly curing process.

27. Finally, John at column 3, lines 64-67, states [a]n excessive cure, on the other hand, reduces the adhesive properties of the film to a degree which makes it difficult to apply in commercial sealing operations, e.g., in the assembling of an aircraft." This passage clearly teaches away from the current invention because John's "excessive cure" is a reference to a fully cured polysulphide sealant, as would normally be understood by those of ordinary skill in the art. Of course, in the present invention wherein the fully cured sealant layer is tack free and in a condition where adhesion to surfaces cannot take place.

28. Thus, based upon the above, I conclude that the John reference does not teach that the layer of polysulphide sealant is cured "prior to" assembling the mating surfaces, whereas this pre-assembly curing is positively recited both in method claim 1 and in assembly claim 22.

29. The Examiner, in the sentence bridging pages 2 and 3 of the Final Rejection, suggests that where a claimed product "appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior product." Numerous differences between the resultant assembly when accomplished in the manner of the John patent and when accomplished in the manner of claims 1 and 22 have been noted, i.e., (a) the assembled components

utilizing pre-assembly curing in accordance with the presently claimed invention have a thicker sealant layer (whereas in John, the un-cured sealant will be squeezed out from between the faying surfaces); (b) the cured layer extends more uniformly across the mating surfaces; (c) there is also a sealant layer in the area of the fasteners (whereas in the post-assembly cured process of John, the sealant layer will be squeezed out under the fasteners allowing metal-to-metal contact); and (d) as a result of the pre-assembly curing, the sealant layer, after assembly, will normally be in compression (whereas due to shrinkage during curing, the sealant layer in John will be under tension).

30. Because of the above differences between the assembled product having pre-assembly curing of the polysulphide sealant as opposed to post-assembly curing as in John, it is clear that there are significant benefits which were apparently unrecognized by the John patent (and any other prior art references).

31. For the above reasons, the assembled "assembly" of claim 22 is substantially different from any assembly in accordance with the John patent. Furthermore, such differences would be readily obvious to those of ordinary skill in the art in view of the present application.

32. That I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

WEST et al.
Serial No. 10/535,493

Date: 17/6/08

Dr. Steven Harris

Attachment:
CV of Steven Harris, BSc, PhD

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